



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : István Endre LUKÁCS et al.) Group Art Unit: 2877
)
 Appln. No. : 10/814,252) Examiner: Unknown
)
 Filed : April 1, 2004) Confirmation No.: 6976
)
 For : APPARATUS AND MEASUREMENT PROCEDURE FOR THE FAST,
 QUANTITATIVE, NON-CONTACT TOPOGRAPHIC INVESTIGATION OF
 SEMI-CONDUCTOR WAFERS AND OTHER MIRROR LIKE SURFACES

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. Sections 1.56, 1.97, and 1.98, Applicants hereby submit the following documents for the Examiner's consideration:

- (1) U.S. Patent No. 4,547,073 issued to Kugimiya October 15, 1985. Applicants note that this document is discussed in the instant application beginning in paragraph [0005];
- (2) Yang, "An Optical Imaging Method for Wafer Warpage Measurements," *Journal of the Electrochemical Society*, Vol. 132, No. 5, pp. 1214 – 1218 (1985). Applicants note that this document is discussed in the instant application beginning in paragraph [0007]; and
- (3) "Optical Shop Testing," ed. Malacara, John Wiley & Sons, New York pp. 323 – 349 (1979). German Patent Application No. 25 34 666 published April 29, 1976, which is discussed in the instant application beginning in paragraph [0006].

The following documents were cited in the enclosed copy of the International Search Report conducted in International Patent Application No. PCT/EP02/11011, which is a counterpart of the above-captioned application. In particular, the International Examiner cited:

- (4) Riesz, "Geometrical Optical Model of the Image Formation in Makyoh (Magic Mirror) Topography," *J.Phys.D: Appl.Phys.*, Vol. 33, pp. 3033 – 3040, XP002229672 UK (2000);
- (5) Riesz, "Camera Length and Field of View in Makyoh-topography Instruments," *R.S.I.*, Vol. 72, No. 2, PP. 1591 – 1593, XP002229673 America (February 2001 (2001 – 02));
- (6) Reisz, "Makyoh Topography for the Morphological Study of Compound Semiconductor Wafer and Structures," *Material Science & Engineering*, Vol. B80, pp. 220 – 223, XP002229676 NL (2001);
- (7) Szabo et al., "Makyoh Topography: Curvature Measurements and Implications for the Image Formation," *Jpn. J. Appl. Phys.*, Vol. 35, pp. L258 – L261, XP002229674 (February 15, 1999);
- (8) Laczik, "Quantitative Makyoh Topography," *Proc. Annual ACM Symp. On Principles of Distributed Computing*, Vol. 3743, pp. 151 – 156, XP000874538 (May 1999);
- (9) International Publication No. WO 00/29835 published May 25, 2000;
- (10) Török et al., "Applications of Scanning Optical Microscopy in Materials Science to Detect Bulk Microdefects in Semiconductors," *Journal of Microscopy*, Vol. 188, No. 1, pp. 1 – 16, XP002229675 UK (October 1997);
- (11) Koehler, "Plane-wave X-ray Topography and its Application to Semiconductor Problems," *Journal of Materials Science, Material in Electronics*, Chapman and Hall, London GB, pp. 167 – 174, XP000912483, ISSN: 0957-4522 (May 3, 1999); and
- (12) Kayaalp et al., "Using SEM Stereo to Extract Semiconductor Wafer Pattern Topography," *Proceedings of the SPIE*, SPIE, Bellingham VA, US, vol. 775, pp. 18 – 26,

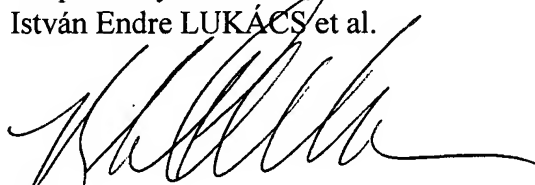
XP000918713 (1987).

Each of the above-cited documents are listed on the enclosed completed copy of the PTO-1449 Form. Accordingly, the Examiner is requested to consider these documents and to indicate such consideration by returning a signed and initialed copy of the PTO-1449 Form with the first official communication.

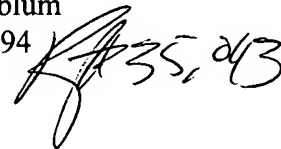
Moreover, copies of the International Search Report and of the cited non-U.S. patent documents are being submitted herewith. However, pursuant to the U.S. Patent and Trademark Office's decision to waive the requirement under 37 C.F.R. 1.98 (a)(2)(i), copies of the cited/listed U.S. patents and U.S. published patent applications are not enclosed herewith. Moreover, if any copies are needed, the Examiner is respectfully requested to contact the undersigned.

Should there be any questions or comments, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
István Endre LUKÁCS et al.

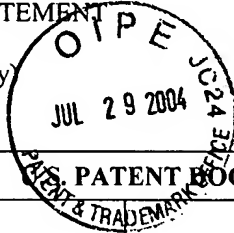


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FORM PTO-1449

U.S. Department of Commerce
Patent and Trademark OfficeAtty. Docket No.
P25051Application No.
10/814,252INFORMATION DISCLOSURE STATEMENT
BY APPLICANT
(Use several sheets if necessary)Applicant
István Endre LAUKÁCS et alFiling Date
April 1, 2004Group
2877

PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	4 5 4 7 0 7 3	10/15/85	KUGIMIYA			

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
0 2 / 2 9 8 3 5	05/25/00	W.I.P.O			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

1	Yang, "An Optical Imaging Method for Wafer Warpage Measurements," <i>Journal of the Electrochemical Society</i> , Vol. 132, No. 5, pp. 1214 – 1218 (1985).
2	"Optical Shop Testing," ed. Malacara, John Wiley & Sons, New York pp. 323 – 349 (1979).
3	Riesz, "Geometrical Optical Model of the Image Formation in Makyoh (Magic Mirror) Topography," <i>J.Phys.D: Appl.Phys.</i> , Vol. 33, pp. 3033 – 3040, XP002229672 UK (2000).
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5	Reisz, "Makyoh Topography for the Morphological Study of Compound Semiconductor Wafer and Structures," <i>Material Science & Engineering</i> , Vol. B80, pp. 220 – 223, XP002229676 NL (2001).
6	Szabo et al., "Makyoh Topography: Curvature Measurements and Implications for the Image Formation," <i>Jpn. J. Appl. Phys.</i> , Vol. 35, pp. L258 – L261, XP002229674 (February 15, 1999).
7	Laczik, "Quantitative Makyoh Topography," <i>Proc. Annual ACM Symp. On Principles of Distributed Computing</i> , Vol. 3743, pp. 151 – 156, XP000874538 (May 1999).
8	Török et al., "Applications of Scanning Optical Microscopy in Materials Science to Detect Bulk Microdefects in Semiconductors," <i>Journal of Microscopy</i> , Vol. 188, No. 1, pp. 1 – 16, XP002229675 UK (October 1997).
9	Koehler, "Plane-wave X-ray Topography and its Application to Semiconductor Problems," <i>Journal of Materials Science</i> , Material in Electronics, Chapman and Hall, London GB, pp. 167 – 174, XP000912483, ISSN: 0957-4522 (May 3, 1999).
1 0	Kayaalp et al., "Using SEM Stereo to Extract Semiconductor Wafer Pattern Topography," <i>Proceedings of the SPIE</i> , SPIE, Bellingham VA, US, vol. 775, pp. 18 – 26, XP000918713 (1987).

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.